

## Urban Land Use Management

Urban land use management consists of planning for better urban land use decisions that provide efficient use of water and other resources. The way in which we use land — the types of use and the level of intensity — has a direct relationship to water supply and quality.

### Current Urban Land Use Patterns in California

Traditional urban development patterns are often characterized by fragmented and segregated land uses, low density residential and strip commercial development, and a lack of connectivity within and between neighborhoods that can consume large quantities of land per capita. The result is the consumption of more prime farmland, open space, habitat, and an increased impact on other natural resources. These traditional development patterns rely primarily on the automobile to connect jobs, services, and community amenities. Transportation alternatives such as walking, biking, and public transportation are often unsafe, ineffective, or not economically feasible. The creation of large amounts of impervious surfaces, such as roads and parking lots, results in the degradation of water quality by causing more rapid and larger amounts of surface runoff. This change in runoff also alters stream flow and watershed hydrology, reduces groundwater recharge, increases stream sedimentation, and increases the need for infrastructure to control storm runoff.

Growth can be managed to improve our communities. In some of the most densely populated regions of the state, including the San Francisco Bay Area and Los Angeles, headway is being made to grow more compactly, provide jobs close to housing, provide transit to connect people with community resources and opportunities, and to mix land uses for a more vibrant social fabric. California law (Government Code § 65041.1-65042) establishes three state planning priorities that encourage a new development pattern for the state. These priorities organize state capital and infrastructure investments around:

1. Infill development
2. Protection of environmental and agricultural resources
3. Compact development that is contiguous to existing development and infrastructure

These statutorily mandated land use planning principles recognize the need for state agencies to coordinate their actions. Proposed state capital improvements will not be included in the state's five-year infrastructure plan until they are consistent with the planning priorities. This will indirectly, but powerfully influence local land use decisions.

Local Agency Formation Commissions (LAFCOs) are regional planning agencies that were established to encourage logical and efficient development patterns. With the recent changes to Government Code § 56000 et. seq., LAFCOs are now required to perform municipal service reviews on a regular basis. This will allow a comprehensive evaluation of how all services, including water, are delivered to developing areas of the state.

### Potential Benefits from Resource Efficient Development

Development patterns that regionally integrate transportation, parks, open space, schools, energy, housing, water, sewage, and garbage collection can result in multiple benefits not realized by traditional development patterns. Regionally resource efficient development patterns use existing infrastructure and compact development that supports walking, biking, and public transit. It encourages a mix of land uses

and a balance of jobs and housing both of which reduce miles and time spent in automobiles. There are numerous water-related benefits that accrue from resource efficient development. It requires less water and minimizes pollution of our surface and groundwater. Also, by focusing on infill and compact development, impacts to habitat, watershed functions, and groundwater recharge areas are reduced.

Compact, mixed-use development can reduce water demand, even with moderate increases in density. As a rule of thumb, landscaping irrigation accounts for almost half of residential water usage. An increase in residential density from four units per acre to five reduces the landscaping area by 20 percent, which should cut water usage by roughly 10 percent compared to the lower density development. A smaller urban footprint reduces impervious surfaces. This generates less surface runoff and sediment load, and minimizes intrusion into watersheds and groundwater recharge areas which receive the runoff and sediment. Less interference with natural systems can also reduce the frequency and severity of flood events.

**Experience from Other States**

**Studies in New Jersey and South Carolina found that when compact development, that encourages open space, was compared to traditional development patterns, compact development reduced the amount of runoff and pollution. In the New Jersey study, the compact development pattern reduced pollution from 10 percent for lead, to 40 percent for nitrogen and phosphorus over a 20-year period. The study also found that compact development reduced water and wastewater infrastructure costs because demand was decreased and less physical infrastructure was needed. In South Carolina, a compact town development model produced 43 percent less runoff than a traditional development model.**

## Potential Costs

Cost savings may result from reduced costs to treat and store surface runoff. There may also be a reduction in costs related to flood protection. Resource efficient development requires less infrastructure expansion to increase water supply, and lower mitigation costs for development impacts on agricultural land and wildlife habitat.

There will be new costs associated with changing the way local, regional, and state agencies plan our urban areas. Among these are costs for increased communication and coordination between land use agencies, water suppliers, and agencies which regulate water quality. Increased coordination among all levels of government will be necessary to coordinate inter-agency planning efforts, to develop information databases, and to interpret and share data and information.

State and local development codes, including zoning ordinances and building codes, may need to be changed to facilitate a more resource efficient development model. There may be costs to educate the public, decision makers, and the development community about the benefits of resource efficient development. Funding institutions, including state government agencies, may need to target water quality and water supply funding programs to encourage infill and compact development.

Infill development often requires the upgrading of existing infrastructure to increase its capacity. These infrastructure costs may be offset in the long run by avoiding the costs of infrastructure and municipal service expansion that traditional development patterns require. Most of the costs associated with using a resource efficient development pattern seem to be short-term, while the cost savings are more long-term.

## Major Issues

### Disincentives for Change

Local governments make most of the land use decisions in California. There are many reasons why local governments do not use more resource efficient development patterns including: community resistance to infill or higher density development, institutional biases in local zoning ordinances which have not been updated for many years, the added cost to conduct regional planning efforts, the cost and liability associated with pursuing infill projects, and traditional environmental mitigation strategies that encourage lower density development.

### Coordination

Recent changes to the Government Code and the Water Code requires local governments to determine whether there will be enough water to supply a proposed development project before it can be approved. This will require land use agencies and water agencies to communicate and coordinate on project-level development decisions that have been made independently in the past.

## Recommendations

### State

1. All state agencies that influence or affect land use development or infrastructure development must update their strategic and functional plans to be consistent with the three state planning priorities by Jan. 1, 2005. Funding requests for infrastructure or capital improvements also must be consistent with the three state planning priorities as of Jan. 1, 2005, to be included in the state's five-year infrastructure plan.
2. Provide incentives to developers and local governments to plan and build using more resource efficient development patterns. This can be done through prioritizing planning and infrastructure grants to encourage infill and compact development forms.
3. Encourage local governments to adopt a water element in their general plans or otherwise show compliance with recent changes to the Government Code and the Water Code, which requires local governments to determine whether there will be enough water to supply a proposed development project before it can be approved.
4. Provide technical assistance to local governments on how to incorporate resource efficient development into their local general plan, related zoning ordinances, and specific plans and how to prepare required water supply assessments before approving major new development projects.
5. Develop and publicize accurate and relevant data on water supply and water quality to help local agencies in their planning efforts.
6. Encourage more research on the impacts of resource efficient development patterns and best practices.

### Local Government

1. Recognize regional needs and resources when designing and building neighborhoods and communities. Coordinate with other local agencies, regional planning agencies, and local water agencies and watershed managers.
2. Promote the rehabilitation of aging or inadequate infrastructure to help infill development.
3. Direct new development away from prime agricultural land, open space, flood plains, recharge areas and wetlands to areas where there is existing infrastructure.
4. Encourage less water-intensive landscaping.

5. Reduce the amount of impervious surfaces used in development especially near waterways.

### **Regional Government**

1. LAFCOs, councils of governments, and watershed planning organizations should participate in the development of local general plans by offering policy recommendations that are supported by data and information.
2. LAFCOs should consider water supply and water quality issues in the context of their charge to encourage logical and efficient development patterns that minimize impacts on agricultural land and maximize housing affordability.

### **Water Suppliers**

1. Develop and make available water resource information, such as water supply and water quality, to local governments that can be used in local and regional land use decisions, including general plan formulation and municipal service reviews.
2. Collaborate on assessing water supply availability for new development.

#### **Information Sources**

- Governor's Office of Planning and Research, Environmental Goals and Policy Report, November 2003.